

MCCAIN FOODS (PWS 5160036) SOURCE WATER ASSESSMENT FINAL REPORT

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State of Idaho Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area, sensitivity factors associated with the wells, and aquifer characteristics.

This report, *Source Water Assessment for McCain Foods, Burley, Idaho* describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

Final susceptibility scores are derived from equally weighting system construction scores, hydrologic sensitivity scores, and potential contaminant/land use scores. Therefore, a low rating in one or two categories coupled with a higher rating in other categories results in a final rating of low, moderate, or high susceptibility. With the potential contaminants associated with most urban and heavily agricultural areas, the best score a well can get is moderate. Potential contaminants are divided into four categories, inorganic contaminants (IOCs, i.e. nitrates, arsenic), volatile organic contaminants (VOCs, i.e. petroleum products), synthetic organic contaminants (SOCs, i.e. pesticides), and microbial contaminants (i.e. bacteria). As different wells can be subject to various contamination settings, separate scores are given for each type of contaminant.

The McCain Foods drinking water system (PWS 5160036) consists of three ground water wells; Wells #1, #2, and #3. Overall, the wells rated moderate susceptibility to IOCs, VOCs, SOCs, and microbial contaminants. A low to moderate rating for hydrologic sensitivity and moderate system construction scores led to these overall scores, despite the nearly 400 potential contaminant sources.

The only IOCs detected in the sampled water have been barium, fluoride, antimony, and nitrate. In January 1997, Well #2 had an antimony detection of 0.005 milligrams per liter (mg/L), where the maximum contaminant level (MCL) for antimony is 0.006 mg/L. Since September 1995, nitrate levels have been generally increasing. Well #1 has varied between about 4.1 mg/L and 6.6 mg/L from November 1982 and June 2001. Well #2 has varied between about 1.6 mg/L and 3.9 mg/L from November 1982 and June 2001. Well #3 has varied between about 2.1 mg/L and 5.5 mg/L from January 1997 and June 2001. The MCL for nitrate is 10 mg/l. Since some of these are greater than ½ the MCL for nitrate, McCain Foods could be proactive in the treatment of this contaminant. No VOCs or SOCs have been detected in the wells. Total coliform bacteria have been detected in the distribution system, but there has not been a repeat detection at any of the wellheads. Surrounding agricultural land use practices have contributed to the ratings of “High” for county level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use. In addition, the delineations cross a nitrate priority area as well as an SOC priority area for the pesticide Atrazine.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

For the McCain Foods, drinking water protection activities should first focus on correcting any deficiencies outlined in the 2000 Sanitary Survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system’s components and its capacity). No chemicals should be stored or applied within the 50-foot radius of the wellhead. There are numerous potential contaminant sources within the delineated area, therefore McCain Foods should focus on managing hazardous material on-site in a proper manner. Other practices aimed at reducing the leaching of agricultural chemicals from agricultural land within the designated source water area should be implemented. Most of the designated areas are outside the direct jurisdiction of McCain Foods. Partnerships with state and local agencies and industry groups should be established and are critical to success.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan as the delineations are near urban and residential land uses areas. Public education topics could include proper lawn and garden care practices, household hazardous waste disposal methods, proper care and maintenance of septic systems, and the importance of water conservation to name but a few. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA. There are transportation corridors near the delineations, therefore the Department of Transportation should be involved in protection activities. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

A system with a fully developed drinking water protection program will incorporate many strategies, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Twin Falls Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR MCCAIN FOODS, BURLEY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings, used to develop this assessment, is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of this assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a drinking water protection program should be determined by the local community based on its own needs and limitations. Drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The McCain Foods system consists of three ground water wells that serve approximately 750 people through one connection. The wells are located in Cassia County, to the west of the City of Burley (Figure 1).

The main IOC water chemistry issue recorded in the public water system is nitrate, which has been increasing since 1995. Current levels are greater than ½ the current MCL for Well #1. Well #3 recorded a measurement of 5.44 mg/L in March 1999. Though none of the wells show a statistical trend in nitrate levels, the recorded levels are above the natural background. No VOCs or SOCs have been detected in the wells. Total coliform bacteria have been detected in the distribution system, but there has not been a repeat detection at any of the wellheads.

County level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use are rated as high for the area. In addition, the delineations fall within a nitrate priority area and an SOC priority area for the pesticide Atrazine.

Defining the Zones of Contribution – Delineation

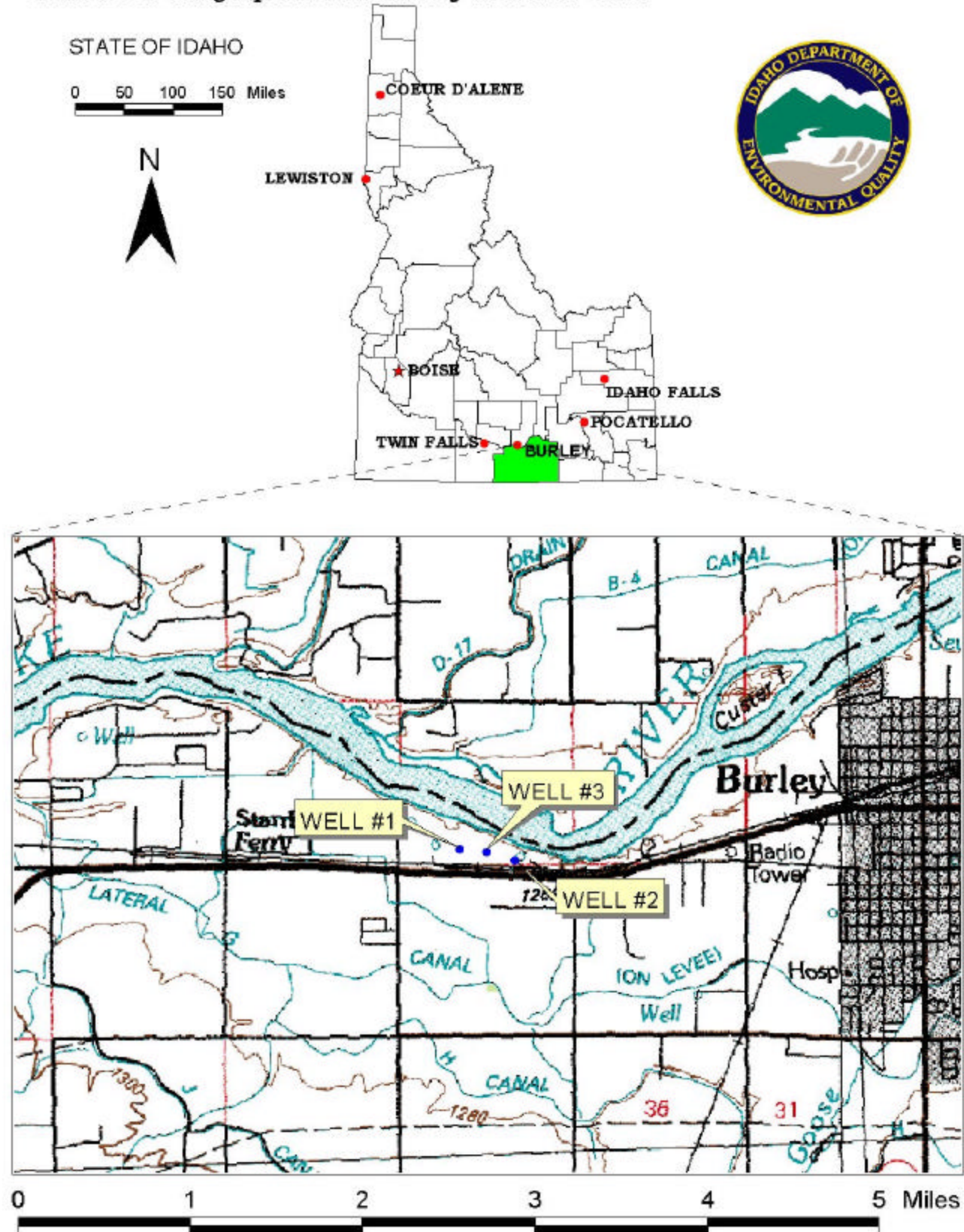
The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel zones (zones indicating the number of years necessary for a particle of water to reach a well) for water in the aquifer. DEQ used a refined computer model approved by the EPA in determining the time-of-travel (TOT) zones for water associated with the Goose Creek – Golden Valley aquifer south of the Snake River in the vicinity of the McCain Foods. The computer model used site-specific data, assimilated by DEQ from a variety of sources including local area well logs and hydrogeologic reports summarized below.

The wells extract water from basalt of the Snake River Group to the northeast and east and possibly the Idavada Volcanics to the south of the facility. The Snake River Group consists of basalt flows with thicknesses ranging from a few to several tens of feet. Contacts between the flows and in rubbly zones are the best water producers. The basalt overlies the Idavada Volcanics.

The Idavada Volcanics unit, locally referred to as rhyolite, consists of welded ash and tuff, rhyolite, and some basalt flows. The flows are dense and are commonly reddish-brown, gray, or black. The tuff and ash beds are fine to coarse grained, light colored, and commonly water laden (Crosthwaite, 1969).

Twenty-four years of records since 1964 set the average yearly rainfall in Burley at 8.6 inches (Crosthwaite, 1969). The Albion Range and the fault zone at its base bound the plain on the southeast and the Rock Creek Hills bound the plain on the southwest. The lowland slopes northward from an altitude of about 4,600 feet at Oakley to 4,150 feet at Burley (Crosthwaite, 1969).

FIGURE 1. Geographic Location of McCain Foods



The regional Snake River Group basalts to the east and northeast mainly influenced the McCain Foods delineation modeling. However, there was also a southerly component of the flow from the fault zone along the Albion Range. Previous modeling (Garabedian, 1992) in the area was used as a guide.

The delineated source water assessment area for the McCain Foods wells can best be described as a pie slice extending east of the well, varying from 1.5 to 5 miles wide and about 6.5 miles long (Figure 2). The data used by DEQ in determining the source water assessment delineation areas are available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and McCain Foods and from available databases.

The dominant land use outside the McCain Foods area is urban and irrigated agriculture. Land use within the immediate area of the wellheads consists of a food processing facility. Highway 30 and the Eastern Idaho Railroad are major transportation corridors in the area. The Snake River also transects the area.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both, to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted in June through August of 2001. This involved identifying and documenting potential contaminant sources within the McCain Foods Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. Jay Ulrich, the McCain Foods Water Operator, confirmed this information.

All three wells share the same delineation. The delineation (Table 1 – Attachment A, Figure 2) has 361 potential point sources. These potential contaminant sources include leaking underground storage tank (LUST) sites, underground storage tank (UST) sites, commercial, industrial, and municipal businesses, sand and gravel pits, dairies, above ground storage tank (AST) sites, and Group 1 sites. Additionally, there are sites regulated by the Comprehensive Environmental Response Compensation and Liability

Act (CERCLA), the Resource Conservation Recovery Act (RCRA), the Superfund Amendments and Reauthorization Act (SARA), and the National Pollutant Discharge Elimination System (NPDES).

Highway 30, the Eastern Idaho Railroad, and the Snake River are major sources that cross the delineations. If an accidental spill occurred in any of these sources, IOCs, VOCs, SOCs, or microbial contaminants could be added to the aquifer system.

Section 3. Susceptibility Analyses

The water system's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Attachment B contains the susceptibility analysis worksheet for the system. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

The hydrologic sensitivity of a well is dependent upon four factors: the surface soil composition, the material in the vadose zone (between the land surface and the water table), the depth to first ground water, and the presence of a 50-foot thick fine-grained zone above the producing zone of the well. Slowly draining soils such as silt and clay typically are more protective of ground water than coarse-grained soils such as sand and gravel. Similarly, fine-grained sediments in the subsurface and a water depth of more than 300 feet protect the ground water from contamination.

The hydrologic sensitivity was moderate for Well #1 and low for both Well #2 and Well #3 (see Table 3). This reflects the poorly drained nature of the soil, a vadose zone composed of sand and clay, and the presence of thick fine-grained sediment layers retarding the downward movement of contaminants. Well #1 rated moderate because no determination could be made of the makeup of the vadose zone.

Well Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the intake of the well. Lower scores imply a system is less vulnerable to contamination. For example, if the well casing and annular seal both extend into a low permeability unit, then the possibility of contamination is reduced and the system construction score goes down. If the highest production interval is more than 100 feet below the water table, then the system is considered to have better buffering capacity. If the wellhead and surface seal are maintained to standards, as outlined in Sanitary Surveys, then contamination down the well bore is less likely. If the well is protected from surface flooding and is outside the 100-year floodplain, then contamination from surface events is reduced.

The McCain Foods drinking water system consists of three wells that extract ground water for industrial uses. The wells rated moderate susceptibility for system construction. The 2000 Sanitary Survey found that the well casings should be elevated at least 12 inches above ground and at least 6 inches above the floor of the wellhouse to protect from surface flooding. The wells should be vented with screened, down-turned vents at least 18 inches above the floor. Table 2 contains a summary of the well construction information.

Table 2. McCain Foods Well Construction Summary Information

Well	Well Depth (ft)	Water Table Depth (ft)	Casing: diameter/thickness (in)	Casing: depth (ft)/formation	Surface seal: depth (ft)/formation	Screened Interval (ft)	Drill Year	Sanitary Survey Elements (A/B) ¹
Well #1	640	216	20/NI; 16/0.250	489/Black lava & layers of clay	NI/NI	489-640 open hole	1983	Yes/No
Well #2	550	220	20/0.250; 16/0.250; 14/0.250	125/clay; 306/black lava; 485/yellow clay	125/Clay	485-500 open hole	1965	Yes/No
Well #3	377	209	24/0.250; 20/0.375; 16/0.375	304/Black basalt	19/Coarse gravel	304-377 open hole	1974	No/No

¹ A = Well and surface seal in compliance; B = Protected from surface flooding
NI = no information was available

Though the McCain Foods Wells #1 and #2 may have met construction standards at the time of their installation, current well construction standards are stricter. The Idaho Department of Water Resources *Well Construction Standards Rules* (1993) require all Public Water Systems (PWSs) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works* (1997) during construction. Some of the requirements include casing thickness, well tests, and depth and formation type that the surface seal must be installed into. Table 1 of the *Recommended Standards for Water Works* (1997) lists the required steel casing thickness for various diameter wells. Twelve-inch and greater diameter casing on wells requires a casing thickness of at least 0.375-inches. Well tests are required at the design pumping rate for 24 hours or until stabilized drawdown has continued for at least six hours when pumping at 1.5 times the design pumping rate. Wells #1 and #2 received an additional point in the system construction category because they do not meet current well construction standards, although they may have at time of construction.

Potential Contaminant Source and Land Use

The wells rated high for IOCs (e.g. arsenic, nitrate), VOCs (e.g. petroleum products), SOC (e.g. pesticides), and microbial contaminants (e.g. bacteria) (Table 3). The large number of urban potential contaminant sites, as well as the local transportation corridors and the irrigated agricultural land contributed the largest numbers of points to the contaminant inventory rating. County level nitrogen fertilizer use, county level herbicide use, and total county level ag-chemical use are rated as high for all three wells. In addition, the delineation falls within a nitrate priority area and an SOC priority area for the pesticide Atrazine.

Final Susceptibility Rating

An IOC detection above a drinking water standard MCL, any detection of a VOC or SOC, storage of chemicals within 50 feet of the wellhead, or a detection of total coliform bacteria or fecal coliform bacteria at the wellhead will automatically give a high susceptibility rating to a well, despite the land use of the area, because a pathway for contamination already exists. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0- to 3-year time-of-travel zone (Zone 1B) and much agricultural land contribute greatly to the overall ranking. In terms of total susceptibility, the well rates moderate for all contaminant types.

Table 3. Summary of the McCain Foods Susceptibility Evaluation

Source	Susceptibility Scores ¹									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well #1	M	H	H	H	H	M	M	M	M	M
Well #2	L	H	H	H	H	M	M	M	M	M
Well #3	L	H	H	H	H	M	M	M	M	M

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

In terms of total susceptibility, the wells rated moderate for all contaminants. Multiple commercial and industrial potential contaminant sources, agricultural land uses, high county wide nitrogen fertilizer use, high county wide herbicide use, Highway 30, the Eastern Idaho Railroad, and the Snake River contributed the most land use points to the susceptibility rating. Low to moderate hydrologic sensitivity and moderate system construction scores outweighed the numerous potential sources.

The main IOC water chemistry issue recorded in the public water system is nitrate, which has been increasing since 1995. Current levels are greater than ½ the current MCL for Well #1. Well #3 recorded a measurement of 5.44 mg/L in March 1999. Though none of the wells show a statistical trend in nitrate levels, the recorded levels are above natural background levels. No VOCs or SOCs have been detected in the wells. Total coliform bacteria have been detected in the distribution system, but there has not been a repeat detection at any of the wellheads.

County level nitrogen fertilizer use, county level herbicide use, and total county level agricultural chemical use are rated as high for the area. In addition, the delineations fall within a nitrate priority area and an SOC priority area for the pesticide Atrazine.

Section 4. Options for Drinking Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective drinking water protection program is tailored to the particular local drinking water protection area. For the McCain Foods, drinking water protection activities should first focus on correcting any deficiencies outlined in the 2000 sanitary survey. No chemicals should be stored or applied within the 50-foot radius of the wellhead. There are numerous potential contaminant sources within the delineated area, McCain Foods should focus on managing hazardous material on-site in a proper manner. Other practices aimed at reducing the leaching of agricultural chemicals from agricultural land within the designated source water area should be implemented. Most of the designated areas are outside the direct jurisdiction of the McCain Foods. Partnerships with state and local agencies and industry groups should be established and are critical to success.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan as the delineations are near urban and residential land uses areas. Public education topics could include proper lawn and garden care practices, household hazardous waste disposal methods, proper care and maintenance of septic systems, and the importance of water conservation to name but a few. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA. There are transportation corridors near the delineations, therefore the Department of Transportation should be involved in protection activities. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

A system with a fully developed drinking water protection program will incorporate many strategies, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Twin Falls Regional Office of the DEQ or the Idaho Rural Water Association.

Assistance

Public water suppliers and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Twin Falls Regional DEQ Office (208) 736-2190

State DEQ Office (208) 373-0502

Website: <http://www.deq.state.id.us>

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper (mlharper@idahoruralwater.com), Idaho Rural Water Association, at (208) 343-7001 for assistance with drinking water protection (formerly wellhead protection) strategies.

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

References Cited

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deSonneville, J.L.J, 1972, *Development of a Mathematical Groundwater Model*, Water Resources Research Institute, University of Idaho, Moscow, Idaho, 227 p.

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Attachment A

Potential Contaminant Table

Table 1. McCain Foods, Wells #1, #2, & #3, Potential Contaminant Inventory

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
1, 4, 45	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed; RCRA	0 - 3	Database Search	VOC, SOC
2, 5	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	0 - 3	Database Search	VOC, SOC
3, 13	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	0 - 3	Database Search	VOC, SOC
6	UST - Closed	0 - 3	Database Search	VOC, SOC
7, 16	UST - Closed; State Government-National Security	0 - 3	Database Search	VOC, SOC
8	UST - Closed	0 - 3	Database Search	IOC, VOC, SOC
9	UST - Open	0 - 3	Database Search	VOC, SOC
10, 31	UST - Closed; Ambulance Service	0 - 3	Database Search	IOC, VOC, SOC, Microbes
11, 26, 47	UST - Closed; Automobile Dealers-New Cars; RCRA	0 - 3	Database Search	VOC, SOC
12	UST - Closed	0 - 3	Database Search	VOC, SOC
14	Fertilizers (Wholesale)	0 - 3	Database Search	IOC, SOC, Microbes
15	Farms	0 - 3	Database Search	IOC, SOC, Microbes
17	Tree Service	0 - 3	Database Search	IOC, SOC, Microbes
18, 61	Corrugated & Solid Fiber Boxes; SARA	0 - 3	Database Search	IOC, VOC
19	Roofing Contractors	0 - 3	Database Search	IOC, VOC, SOC
20	Painters	0 - 3	Database Search	IOC, VOC, SOC
21	Automobile Repairing & Service	0 - 3	Database Search	IOC, VOC, SOC
22	Welding	0 - 3	Database Search	IOC, VOC, SOC
23	Nurserymen	0 - 3	Database Search	IOC, SOC, Microbes
24	Signs (Manufacturers)	0 - 3	Database Search	IOC, VOC
25, 62	Oils-Fuel (Wholesale); SARA	0 - 3	Database Search	VOC, SOC
27	Feed-Dealers (Wholesale)	0 - 3	Database Search	IOC, SOC, Microbes
28, 29, 30	Buildings-Metal; Roofing Contractors; Storage-Household & Commercial	0 - 3	Database Search	IOC, VOC, SOC
32	Pumps-Repairing	0 - 3	Database Search	IOC, VOC, SOC
33	Machine Shops	0 - 3	Database Search	IOC, VOC, SOC
34, 63	Grain-Dealers (Wholesale); SARA	0 - 3	Database Search	IOC, SOC, Microbes
35	Gasoline-Wholesale	0 - 3	Database Search	VOC, SOC
36	Hardware-Retail	0 - 3	Database Search	IOC, VOC, SOC
37	Parking Area Maintenance & Marking	0 - 3	Database Search	IOC, VOC, SOC
38, 64	Farm Supplies (Wholesale); SARA	0 - 3	Database Search	IOC, VOC, SOC, Microbes
39	Automobile Renting & Leasing	0 - 3	Database Search	VOC, SOC
40	NPDES - Industrial	0 - 3	Database Search	IOC, Microbes
41, 42	NPDES - Industrial	0 - 3	Database Search	IOC, Microbes
43	TRI site	0 - 3	Database Search	IOC, VOC, SOC
44	CERCLA	0 - 3	Database Search	IOC, VOC, SOC
46	RCRA	0 - 3	Database Search	IOC, VOC, SOC
48	RCRA	0 - 3	Database Search	IOC, VOC, SOC
49	RCRA	0 - 3	Database Search	IOC
50	Gold mine	0 - 3	Database Search	IOC, VOC, SOC
51	Clay mine	0 - 3	Database Search	IOC
52	Sand and gravel pit	0 - 3	Database Search	IOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
53	Sand and gravel pit	0 - 3	Database Search	IOC
54	Sand and gravel pit	0 - 3	Database Search	IOC
55	Sand and gravel pit	0 - 3	Database Search	IOC
56, 57	SARA	0 - 3	Database Search	IOC, VOC, SOC, Microbes
58	SARA	0 - 3	Database Search	IOC, VOC
59	SARA	0 - 3	Database Search	IOC, VOC, SOC, Microbes
60	SARA	0 - 3	Database Search	IOC, VOC, SOC
65	SARA	0 - 3	Database Search	IOC, VOC, SOC
66	Group 1 - Nitrate	0 - 3	Database Search	IOC
67	Dairy = 100 cows	0 - 3	Enhanced Inventory	IOC, Microbes
68, 117	LUST - Site Cleanup Incomplete , Impact: GROUND WATER; UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
69, 141	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
70, 87	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
71, 89	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
72, 90	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
73, 91	LUST - Site Cleanup Complete , Impact: GROUND WATER; UST - Closed	3 - 6	Database Search	VOC, SOC
74, 96	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	3 - 6	Database Search	VOC, SOC
75, 97, 163	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed; Oils-Fuel (Wholesale)	3 - 6	Database Search	VOC, SOC
76, 103	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
77, 105, 169	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open; Service Stations-Gasoline & Oil	3 - 6	Database Search	VOC, SOC
78, 107	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
79, 115	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	3 - 6	Database Search	VOC, SOC
80, 122	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
81, 128	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
82, 130	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
83, 143, 248	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed; Automobile Parts & Supplies-Retail	3 - 6	Database Search	IOC, VOC, SOC
84, 147	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	3 - 6	Database Search	VOC, SOC
85, 104	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	3 - 6	Database Search	VOC, SOC
86, 308	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
88	UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
92	UST - Closed	3 - 6	Database Search	VOC, SOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
93, 236, 237	UST - Closed; Car Washing & Polishing	3 - 6	Database Search	VOC, SOC
94, 167	UST - Closed; Fire Departments	3 - 6	Database Search	VOC, SOC
95	UST - Open	3 - 6	Database Search	VOC, SOC
98, 151	UST - Closed; Oils-Fuel (Wholesale)	3 - 6	Database Search	VOC, SOC
99	UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
100	UST - Closed	3 - 6	Database Search	VOC, SOC
101, 287	UST - Closed; Automobile Dealers-New Cars	3 - 6	Database Search	VOC, SOC
102, 309	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
106	UST - Closed	3 - 6	Database Search	VOC, SOC
108	UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
109	UST - Closed	3 - 6	Database Search	VOC, SOC
110, 280	UST - Closed; Electric Companies	3 - 6	Database Search	IOC, VOC, SOC
111, 204	UST - Closed; Mobile Homes-Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
112	UST - Closed	3 - 6	Database Search	VOC, SOC
113, 317	UST - Open; SARA	3 - 6	Database Search	IOC, VOC, SOC
114, 162, 291	UST - Closed; Automobile Dealers-New Cars; RCRA	3 - 6	Database Search	VOC, SOC
116, 155	UST - Closed; Movers	3 - 6	Database Search	VOC, SOC
118	UST - Closed	3 - 6	Database Search	VOC, SOC
119	UST - Closed	3 - 6	Database Search	VOC, SOC
120	UST - Closed	3 - 6	Database Search	VOC, SOC
121	UST - Closed	3 - 6	Database Search	IOC, VOC, SOC
123, 305	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
124	UST - Closed	3 - 6	Database Search	VOC, SOC
125	UST - Closed	3 - 6	Database Search	VOC, SOC
126	UST - Closed	3 - 6	Database Search	VOC, SOC
127, 153	UST - Closed; Automobile Dealers-Used Cars	3 - 6	Database Search	VOC, SOC
129	UST - Closed	3 - 6	Database Search	VOC, SOC
131	UST - Closed	3 - 6	Database Search	VOC, SOC
132	UST - Closed	3 - 6	Database Search	VOC, SOC
133, 184	UST - Closed; Automobile Repairing & Service	3 - 6	Database Search	VOC, SOC
134	UST - Closed	3 - 6	Database Search	VOC, SOC
135	UST - Closed	3 - 6	Database Search	VOC, SOC
136	UST - Closed	3 - 6	Database Search	VOC, SOC
137	UST - Closed	3 - 6	Database Search	VOC, SOC
138, 307	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
139	UST - Open	3 - 6	Database Search	VOC, SOC
140	UST - Closed	3 - 6	Database Search	VOC, SOC
142, 312	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
144	UST - Open	3 - 6	Database Search	VOC, SOC
145	UST - Closed	3 - 6	Database Search	VOC, SOC
146, 311	UST - Open; SARA	3 - 6	Database Search	VOC, SOC
148	General Contractors	3 - 6	Database Search	IOC, VOC, SOC
149	Livestock Breeders	3 - 6	Database Search	IOC, VOC, Microbes
150	Hardware-Retail	3 - 6	Database Search	IOC, VOC, SOC
152	Fabricated Plate Work-Manufacturer	3 - 6	Database Search	IOC, VOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
154	Batteries-Storage-Retail	3 - 6	Database Search	IOC, VOC
156	Tire-Dealers-Retail	3 - 6	Database Search	VOC, SOC
157	Automobile Parts & Supplies-Retail	3 - 6	Database Search	IOC, VOC, SOC
158	Landscape Contractors	3 - 6	Database Search	IOC, SOC, Microbes
159	Fertilizers (Wholesale)	3 - 6	Database Search	IOC, SOC, Microbes
160, 174, 281	Veterinarians	3 - 6	Database Search	IOC
161, 198	Veterinarians	3 - 6	Database Search	IOC
164	General Contractors	3 - 6	Database Search	IOC, VOC, SOC
165	Contractors-Equipment & Supls-Repair	3 - 6	Database Search	IOC, VOC, SOC
166	Livestock Auction Markets	3 - 6	Database Search	IOC, VOC
168	Tank Removal	3 - 6	Database Search	VOC, SOC
170	Automobile Radiator-Repairing	3 - 6	Database Search	IOC, VOC, SOC
171	Commercial Printing NEC	3 - 6	Database Search	IOC, VOC
172	Lawn Mowers	3 - 6	Database Search	IOC, VOC, SOC
173	Water Treatment Equip Svc & Supls	3 - 6	Database Search	IOC, VOC, SOC
175	General Contractors	3 - 6	Database Search	IOC, VOC, SOC
176	Farm Supplies (Wholesale)	3 - 6	Database Search	IOC, VOC, SOC
177	Farm Equipment (Wholesale)	3 - 6	Database Search	VOC, SOC
178	Recreational Vehicles-Renting & Ls	3 - 6	Database Search	IOC, VOC, SOC
179	Automobile Restoratn-Antique & Classic	3 - 6	Database Search	IOC, VOC, SOC
180	Automobile Parts & Supplies-Retail	3 - 6	Database Search	VOC, SOC
181, 292	Farm Equipment (Wholesale); RCRA	3 - 6	Database Search	IOC, VOC, SOC
182	Automobile Dealers-Used Cars	3 - 6	Database Search	IOC, VOC, SOC
183	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
185	Electric Equipment & Supplies-Wholesale	3 - 6	Database Search	IOC, VOC
186	Tire-Dealers-Retail	3 - 6	Database Search	VOC, SOC
187	Screen Printing	3 - 6	Database Search	IOC, VOC
188	Automobile Body-Repairing & Painting	3 - 6	Database Search	IOC, VOC, SOC
189	Automobile Dealers-Used Cars	3 - 6	Database Search	IOC, VOC, SOC
190, 191	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
192	Brake Service	3 - 6	Database Search	IOC, VOC, SOC
193	Cleaners	3 - 6	Database Search	VOC
194	Laboratories-Dental	3 - 6	Database Search	IOC
195	Wrecker Service	3 - 6	Database Search	IOC, VOC, SOC
196	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
197	Automobile Body Shop Equip/Supls	3 - 6	Database Search	IOC, VOC, SOC
199	Aerial Applicators	3 - 6	Database Search	VOC, SOC
200	Automobile Body-Repairing & Painting	3 - 6	Database Search	IOC, VOC, SOC
201	Signs (Manufacturers)	3 - 6	Database Search	IOC, VOC
202	Automobile Dealers-Used Cars	3 - 6	Database Search	IOC, VOC, SOC
203	Tire-Dealers-Retail	3 - 6	Database Search	VOC, SOC
205	Welding Equipment & Supplies (Wholesale)	3 - 6	Database Search	IOC, VOC, SOC
206, 293	Truck-Repairing & Service; RCRA	3 - 6	Database Search	IOC, VOC, SOC
207	Automobile Body-Repairing & Painting	3 - 6	Database Search	IOC, VOC, SOC
208	Funeral Directors	3 - 6	Database Search	IOC, SOC
209	Photographers-Portrait	3 - 6	Database Search	IOC, VOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
210	Carpet & Rug Cleaners	3 - 6	Database Search	VOC
211	Hydraulic Equipment-Repairing	3 - 6	Database Search	IOC, VOC, SOC
212	Water Treatment Equip Svc & Supls	3 - 6	Database Search	IOC, VOC, SOC
213	Home Improvements	3 - 6	Database Search	IOC, VOC, SOC
214	Belting & Belting Supplies (Wholesale)	3 - 6	Database Search	IOC, VOC, SOC
215	Farms	3 - 6	Database Search	IOC, SOC
216	Hardware-Wholesale	3 - 6	Database Search	IOC, VOC, SOC
217	Motorcycles & Motor Scooters-Rpr	3 - 6	Database Search	IOC, VOC, SOC
218	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
219	Automobile Dealers-Used Cars	3 - 6	Database Search	IOC, VOC, SOC
220	Boat Equipment & Supplies	3 - 6	Database Search	IOC, VOC, SOC
221	Automobile Dealers-Used Cars	3 - 6	Database Search	VOC, SOC
222	Farms	3 - 6	Database Search	IOC, SOC
223	Automobile Parts & Supplies-Retail	3 - 6	Database Search	VOC, SOC
224	Automobile Body-Repairing & Painting	3 - 6	Database Search	IOC, VOC, SOC
225	Cleaners	3 - 6	Database Search	VOC
226	Gasoline-Wholesale	3 - 6	Database Search	VOC, SOC
227	Automobile Parts & Supplies-Retail	3 - 6	Database Search	IOC, VOC, SOC
228	Electric Equipment & Supplies-Wholesale	3 - 6	Database Search	IOC, VOC, SOC
229	Recycling Centers (Wholesale)	3 - 6	Database Search	VOC
230	Truck-Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
231	Automobile Parts & Supplies-Mfrs	3 - 6	Database Search	VOC, SOC
232	Automobile Dealers-Used Cars	3 - 6	Database Search	VOC, SOC
233	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
234	Electric Motors-Dlrs/Repairing	3 - 6	Database Search	IOC, VOC, SOC
235	Service Stations-Gasoline & Oil	3 - 6	Database Search	VOC, SOC
238	General Contractors	3 - 6	Database Search	IOC, VOC, SOC
239	Automobile Body-Repairing & Painting	3 - 6	Database Search	IOC, VOC, SOC
240	Seed Cleaning	3 - 6	Database Search	IOC, SOC
241	Welding Equipment & Supplies (Wholesale)	3 - 6	Database Search	VOC, SOC
242	Trucking-Motor Freight	3 - 6	Database Search	VOC, SOC
243	Automobile & Truck Brokers	3 - 6	Database Search	VOC, SOC
244	Automobile Dealers-Used Cars	3 - 6	Database Search	VOC, SOC
245	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
246	Funeral Directors	3 - 6	Database Search	IOC, SOC
247	Photo Finishing-Retail	3 - 6	Database Search	IOC, VOC
249	Farm Equipment (Wholesale)	3 - 6	Database Search	IOC, VOC, SOC
250	Boat Dealers	3 - 6	Database Search	VOC, SOC
251	Motorcycles & Motor Scooters-Rpr	3 - 6	Database Search	IOC, VOC, SOC
252	Paint-Retail	3 - 6	Database Search	IOC, VOC, SOC
253	Photo Finishing-Retail	3 - 6	Database Search	IOC, VOC
254	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
255	Mufflers & Exhaust Systems-Engine	3 - 6	Database Search	IOC, VOC, SOC
256	Wrecker Service	3 - 6	Database Search	IOC, VOC, SOC
257	Bicycles-Dealers	3 - 6	Database Search	VOC
258	General Contractors	3 - 6	Database Search	IOC, VOC, SOC
259	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
260	Automobile Parts & Supplies-Retail	3 - 6	Database Search	VOC, SOC
261	Hay (Wholesale)	3 - 6	Database Search	IOC, SOC
262	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
263, 294	Cleaners; RCRA	3 - 6	Database Search	VOC
264	Truck-Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
265	Newspapers (Publishers)	3 - 6	Database Search	IOC, VOC
266	Weed Control Service	3 - 6	Database Search	IOC, SOC
267	Service Stations-Gasoline & Oil	3 - 6	Database Search	VOC, SOC
268	Dairies	3 - 6	Database Search	IOC
269	Car Washing & Polishing	3 - 6	Database Search	VOC, SOC
270	Turbochargers (Wholesale)	3 - 6	Database Search	VOC, SOC
271	Photographers-Commercial	3 - 6	Database Search	IOC, VOC
272	Motorcycles & Motor Scooters-Dealer	3 - 6	Database Search	VOC, SOC
273	Newspapers (Publishers)	3 - 6	Database Search	IOC, VOC
274	Tire-Dealers-Retail	3 - 6	Database Search	VOC, SOC
275	Automobile Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
276	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
277	Irrigation Systems & Equipment-Mfr	3 - 6	Database Search	IOC, VOC, SOC
278	Truck-Repairing & Service	3 - 6	Database Search	IOC, VOC, SOC
279	Truck Renting & Leasing	3 - 6	Database Search	VOC, SOC
282	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
283	Commercial Printing NEC	3 - 6	Database Search	IOC, VOC
284	Delivery Service	3 - 6	Database Search	VOC, SOC
285	Engines-Gasoline	3 - 6	Database Search	VOC, SOC
286	Storage-Household & Commercial	3 - 6	Database Search	IOC, VOC, SOC
288	NPDES - Municipal	3 - 6	Database Search	IOC
289	CERCLA	3 - 6	Database Search	IOC
290	CERCLA	3 - 6	Database Search	IOC, VOC, SOC
295	RCRA	3 - 6	Database Search	IOC, VOC, SOC
296	RCRA	3 - 6	Database Search	IOC, VOC, SOC
297	Clay mine	3 - 6	Database Search	IOC
298	Sand and gravel pit	3 - 6	Database Search	IOC
299	Clay mine	3 - 6	Database Search	IOC
300	Sand and gravel pit	3 - 6	Database Search	IOC
301	SARA	3 - 6	Database Search	IOC, VOC, SOC
302	SARA	3 - 6	Database Search	IOC, VOC, SOC
303	SARA	3 - 6	Database Search	IOC, VOC, SOC
304	SARA	3 - 6	Database Search	VOC, SOC
310	SARA	3 - 6	Database Search	VOC, SOC
313	SARA	3 - 6	Database Search	VOC, SOC
314	SARA	3 - 6	Database Search	VOC, SOC
315	SARA	3 - 6	Database Search	VOC, SOC
316	SARA	3 - 6	Database Search	VOC, SOC
318	SARA	3 - 6	Database Search	IOC, SOC
319, 327	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	6 - 10	Database Search	VOC, SOC

Site #	Source Description ¹	TOT ZONE ²	Source of Information	Potential Contaminants ³
320, 329	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	6 - 10	Database Search	VOC, SOC
321	lust site	6 - 10	Database Search	VOC, SOC
322, 338	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed	6 - 10	Database Search	IOC, VOC, SOC
323, 339	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	6 - 10	Database Search	VOC, SOC
324, 333, 356	LUST - Site Cleanup Completed , Impact: Unknown; UST - Closed; SARA	6 - 10	Database Search	IOC, VOC, SOC
325, 332	LUST - Site Cleanup Completed , Impact: Unknown; UST - Open	6 - 10	Database Search	IOC, VOC, SOC
326	UST - Closed	6 - 10	Database Search	IOC, VOC, SOC
328	UST - Open	6 - 10	Database Search	VOC, SOC
330	UST - Closed	6 - 10	Database Search	VOC, SOC
334	UST - Open	6 - 10	Database Search	VOC, SOC
335, 351	UST - Closed; RCRA	6 - 10	Database Search	VOC, SOC
336	UST - Closed	6 - 10	Database Search	VOC, SOC
337	UST - Closed	6 - 10	Database Search	VOC, SOC
340	Dairy <=200 cows	6 - 10	Database Search	IOC
341	Dairy <=200 cows	6 - 10	Database Search	IOC
342	Automobile Parts-Used & Rebuilt	6 - 10	Database Search	IOC, VOC, SOC
343	Florists-Wholesale	6 - 10	Database Search	IOC, SOC
344	General Contractors	6 - 10	Database Search	IOC, VOC, SOC
345	Excavating Contractors	6 - 10	Database Search	IOC, VOC, SOC
346	Building Contractors	6 - 10	Database Search	IOC, VOC, SOC
347	Food Processors & Manufacturers	6 - 10	Database Search	IOC, SOC
348	NPDES - Municipal	6 - 10	Database Search	IOC
349	NPDES - Industrial	6 - 10	Database Search	IOC
350	TRI site	6 - 10	Database Search	IOC, VOC, SOC
352	RCRA	6 - 10	Database Search	IOC, VOC, SOC
353	Sand and gravel pit	6 - 10	Database Search	IOC
354	Gold mine	6 - 10	Database Search	IOC, VOC, SOC
355	Sand and gravel pit	6 - 10	Database Search	IOC
357	SARA	6 - 10	Database Search	IOC, VOC, SOC
358	SARA	6 - 10	Database Search	IOC, VOC, SOC
359	Group1 - Nitrate	6 - 10	Database Search	IOC
360	Group1 - Pesticide	6 - 10	Database Search	SOC
361	Gas Station/Convenience Store	6 - 10	Enhanced Inventory	VOC, SOC
	Eastern Idaho Railroad	0 - 10	GIS Map	IOC, VOC, SOC, Microbes
	State Highway 30	0 - 10	GIS Map	IOC, VOC, SOC, Microbes
	Snake River	0-10	GIS Map	IOC, VOC, SOC, Microbes

¹ LUST = leaking underground storage tank, UST = underground storage tank, AST = above ground storage tank, SARA = Superfund Amendments and Reauthorization Act, NPDES = National Pollutant Discharge Elimination System, CERCLA = Comprehensive Environmental Response Compensation and Liability Act, RCRA = Resource Conservation Recovery Act

² TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

³ IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Attachment B

McCain Foods
Susceptibility Analysis
Worksheets

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

≥ 13 High Susceptibility

Ground Water Susceptibility Report

Public Water System Name :

MCCAIN FOODS

Well# : WELL #1

Public Water System Number 5160036

09/26/2001 12:46:26 PM

1. System Construction		SCORE			
Drill Date	02/02/1983				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2000			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		2			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	42	37	40	15
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	14	12	8	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	2	0
Land use Zone 1B Greater Than 50% Irrigated Agricultural Land		4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		18	16	18	12
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II 25 to 50% Irrigated Agricultural Land		1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		4	4	4	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		3	3	3	0
Cumulative Potential Contaminant / Land Use Score		29	25	29	14
4. Final Susceptibility Source Score		12	11	12	11
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

1. System Construction

SCORE

Drill Date	06/20/1965	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES	2000
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	YES	0
Highest production 100 feet below static water level	YES	0
Well located outside the 100 year flood plain	NO	1

Total System Construction Score 3

2. Hydrologic Sensitivity

Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	NO	0
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	YES	0

Total Hydrologic Score 1

3. Potential Contaminant / Land Use - ZONE 1A

IOC Score VOC Score SOC Score Microbial Score

Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	YES	42	37	40	15
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	14	12	8	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	2	0
Land use Zone 1B Greater Than 50% Irrigated Agricultural Land		4	4	4	4

Total Potential Contaminant Source / Land Use Score - Zone 1B 18 16 18 12

Potential Contaminant / Land Use - ZONE II

Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II 25 to 50% Irrigated Agricultural Land		1	1	1	

Potential Contaminant Source / Land Use Score - Zone II 4 4 4 0

Potential Contaminant / Land Use - ZONE III

Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	

Total Potential Contaminant Source / Land Use Score - Zone III 3 3 3 0

Cumulative Potential Contaminant / Land Use Score 29 25 29 14

4. Final Susceptibility Source Score

10 9 10 9

5. Final Well Ranking

Moderate Moderate Moderate Moderate

1. System Construction		SCORE			
Drill Date	11/07/1974				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2000			
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	YES	0			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		0			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	42	37	40	15
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	14	12	8	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	2	0
Land use Zone 1B Greater Than 50% Irrigated Agricultural Land		4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		18	16	18	12
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II 25 to 50% Irrigated Agricultural Land		1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		4	4	4	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		3	3	3	0
Cumulative Potential Contaminant / Land Use Score		29	25	29	14
4. Final Susceptibility Source Score		10	9	10	9
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate